

ABSTRACT

An optical device used for converging a light beam on a signal recording surface of an optical disc includes an optical lens for converging the light beam on a signal recording surface of the optical disc and a light barrier portion provided on a surface of the optical lens facing the optical disc. The light barrier portion includes a light transmitting aperture through which is transmitted the light beam converged by the optical lens. The light beam illuminated on the optical disc has its diameter controlled by this light transmitting aperture. The light radiated by a light source so as to be incident to the optical device is converged by the optical lens. The light converged by the optical lens is transmitted through the light transmitting aperture and illuminated on the signal recording surface of the optical disc. The diameter of the light beam illuminated on the signal recording surface of the optical disc is controlled by the light transmitting aperture, and thus the numerical aperture NA of the optical device is determined.